

$$\sin \theta = \frac{3}{5}$$

$$0 \leq \theta \leq \frac{\pi}{2}$$

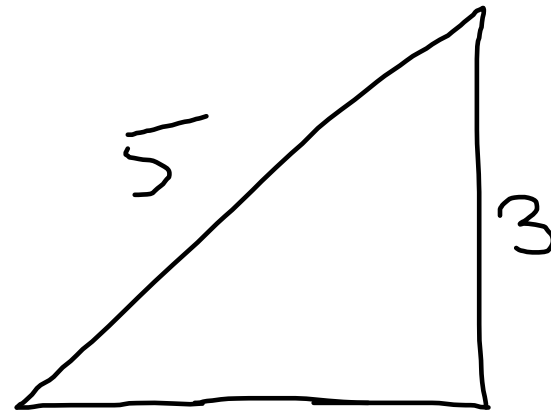
$$\cos \theta = \frac{4}{5}$$

$$\tan \theta = \frac{3}{4}$$

$$\sec \theta = \frac{5}{4}$$

$$\csc \theta = \frac{5}{3}$$

$$\cot \theta = \frac{4}{3}$$



Know $x^2 + 3^2 = 5^2$

$$x = \sqrt{5^2 - 3^2}$$

47.

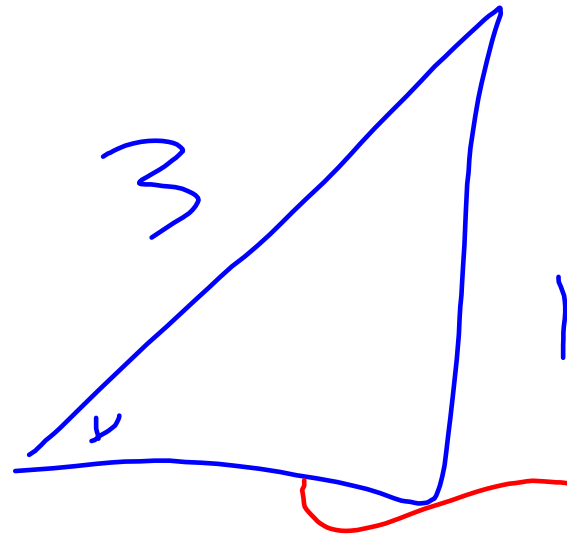
$$\sec y - \cos y \stackrel{?}{=} \tan y \sin y$$

$$\frac{1}{\cos y} - \cos y \stackrel{?}{=} \frac{\sin y}{\cos y} \cdot \sin y$$

$$\frac{1}{\cos y} - \frac{\cos^2 y}{\cos y} \stackrel{?}{=} \frac{\sin^2 y}{\cos y}$$

$$\sin x = \frac{1}{3}$$

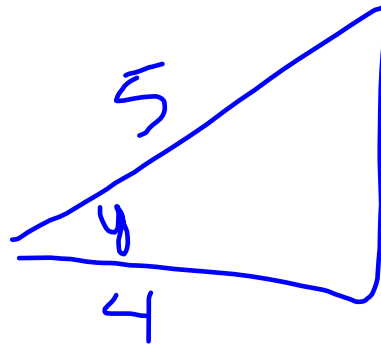
$$\cos x = \frac{2\sqrt{2}}{3}$$



$$\sqrt{9-1} = \sqrt{8} = 2\sqrt{2}$$

$$\sin y = \frac{3}{5}$$

$$\cos y =$$



$$\sqrt{25-16} = 3$$

$$\sin 2x = \cos x$$

Solve for
 $x \in [0, 2\pi]$

$$2 \sin x \cos x = \cos x$$

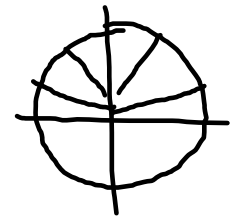
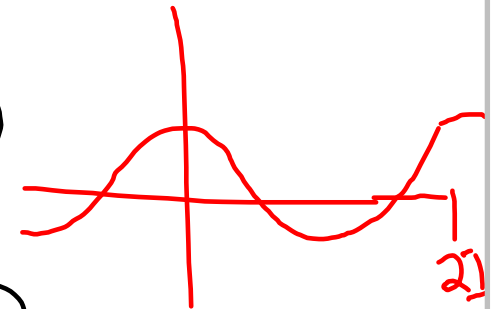
$$2 \sin x \cos x - \cos x = 0$$

$$(2 \sin x - 1) (\cos x) = 0$$

$$\cos x = 0 \quad \text{means} \quad x = \frac{\pi}{2}, \frac{3\pi}{2}$$

$$2 \sin x - 1 = 0 \quad \text{means} \quad \sin x = \frac{1}{2}$$

so $x = \frac{\pi}{6}, \frac{5\pi}{6}$



$$19 \quad f(x) = 5^x$$

$$f(3) = 5^3$$

$$f(9) = 5^9$$

$$\begin{aligned} f(x+h) &= 5^{x+h} \\ &= 5^x \cdot 5^h \end{aligned}$$

$$\frac{f(x+h) - f(x)}{h}$$
$$\frac{5^{x+h} - 5^x}{h}$$

$$A(0) = 100$$

$$A(3) = 200$$

$$A(6) = 400$$

$$A(9) = 800$$

$$A(12) = 1600$$

$$A(15) = 3200$$

$$100 \cdot 2^{t/3} = A(t)$$